

## Conference Abstract

# Effective Public Engagement With Herbaria: Frankenstein's Plants, a Case Study From the Royal Botanic Garden Edinburgh

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## Abstract

The Herbarium at the Royal Botanic Garden Edinburgh (RBGE) have run Frankenstein's Plants as part of the Edinburgh Science Festival, which runs during the Easter holidays. Frankenstein's Plants aims to engage both children and the wider public with the work of herbaria, highlighting the Herbarium at RBGE. We first took part in 2019, and continued in 2023 and 2024.

The Royal Botanic Garden Edinburgh is a well-known and loved location for visitors and local residents, attracting large numbers of people throughout the year. However, the work of the Herbarium is less well-known and many visitors, including residents, are unaware of the Herbarium collection.

The aims of the event include:

- Raising awareness of the herbarium at RBGE, and how it is used by scientists globally
- Educating people on how specimens are made
- Introducing the idea of a scientific name and how it is constructed

Frankenstein's Plants takes participants through the 'life' of a specimen, starting with the selection of material for mounting, through to the digitisation of the specimen, contributing to a virtual herbarium. Participants are encouraged to let their imagination go wild and create a monster (or whatever else they feel like) using the material provided. The event is laid out with a series of stations where staff talk through and support each step of the process (Fig. 1).



Figure 1.

Frankenstein's Plants layout. ©Royal Botanic Garden Edinburgh, all rights reserved. Photo used by permission.

The key steps of specimen creation for this event are:

1. Select plant material: pressed and dried prior to the event, using flowers and foliage bought from an online florist, alongside material gathered from the gardens at RBGE.
2. Mount the specimen: a pre-printed label is attached to a piece of board. The boards we use are approximately A4, allowing enough room for participants to create their creatures. Gummed tape is used to fix the plant material to the sheets, as a relatively low-mess option. The label provides space for recording the species name, a description and 'collector' information. Some locality information and a barcode is prefilled. The details on the label aim to give the participant an idea of the types of data that would typically be recorded when collecting.
3. Name the specimen: participants can create their own name for their specimen. A list of options for the genus and species is provided and consists of both real and made-up genera and species epithets. This is an opportunity for the team to talk about how plants are named using the binomial system, and the importance of Latin names for communicating about life on earth.
4. Describe the specimen: basic botanical terms are provided alongside sketches to get the participants thinking about how species can be described. This step can be modified based on the age of the participant, bringing in more information and technical terms where appropriate.

5. Stamp the specimen: whilst not a key part of the processing of a specimen, it is very much enjoyed by the participants! We have a mix of old stamps that were previously used on specimens that they can choose from.
6. Digitise the specimen: the final step is to take a picture of the specimen. We have a copy stand and DSLR (digital single-lens reflex) camera to allow the participant to take a photo of their specimen. The participant scans the barcode, which we use for the file name and later to look up the newly-digitised specimen in the virtual herbarium. They then take the photo, using remote shutter release triggered by a fixed mouse. The laptop is connected to a big screen, so everyone can see the image of their specimen.

Following the event all the images are uploaded to a Flickr gallery, which acts as our virtual herbarium. A link to this gallery is provided on the label, allowing participants to look up their specimen online, as well as providing an approximate count of participants at the event.

We have members of staff and volunteers from the PhD and MSc cohorts at the RBGE to talk through each step, as well as providing information about the work of the herbarium and Science Division in general. This is a great opportunity for us to engage with the public about our work, especially as the herbarium team has limited regular engagement with the wider public.

Alongside the event we have a display about the Herbarium, including teaching specimens. The display provides information about the collections, without needing a team member to explain it, although we aim to have a member of staff available. Often, we find it is the parents/guardians of the children who are most interested in this, so it allows us to extend the group of people with whom we are engaging.

Over the three years we have run the event, we have engaged with over 1,000 'collectors', ranging in age from 3-95 (Fig. 2), comprised of people from Edinburgh and visitors to the garden from farther afield. This figure does not include those additional members of the public who attend the event, as e.g. the parent/guardian of a child, but do not engage in creating a specimen themselves. If we include an estimate of these additional members of the public, the number of people engaged is nearer to 2,000–3,000.

Feedback, both during the event and post-event, has been exceptional. We have had comments on how engaging the event is, as well as requests to take pictures so that others can run a similar event themselves.

## Keywords

outreach, herbarium, specimen

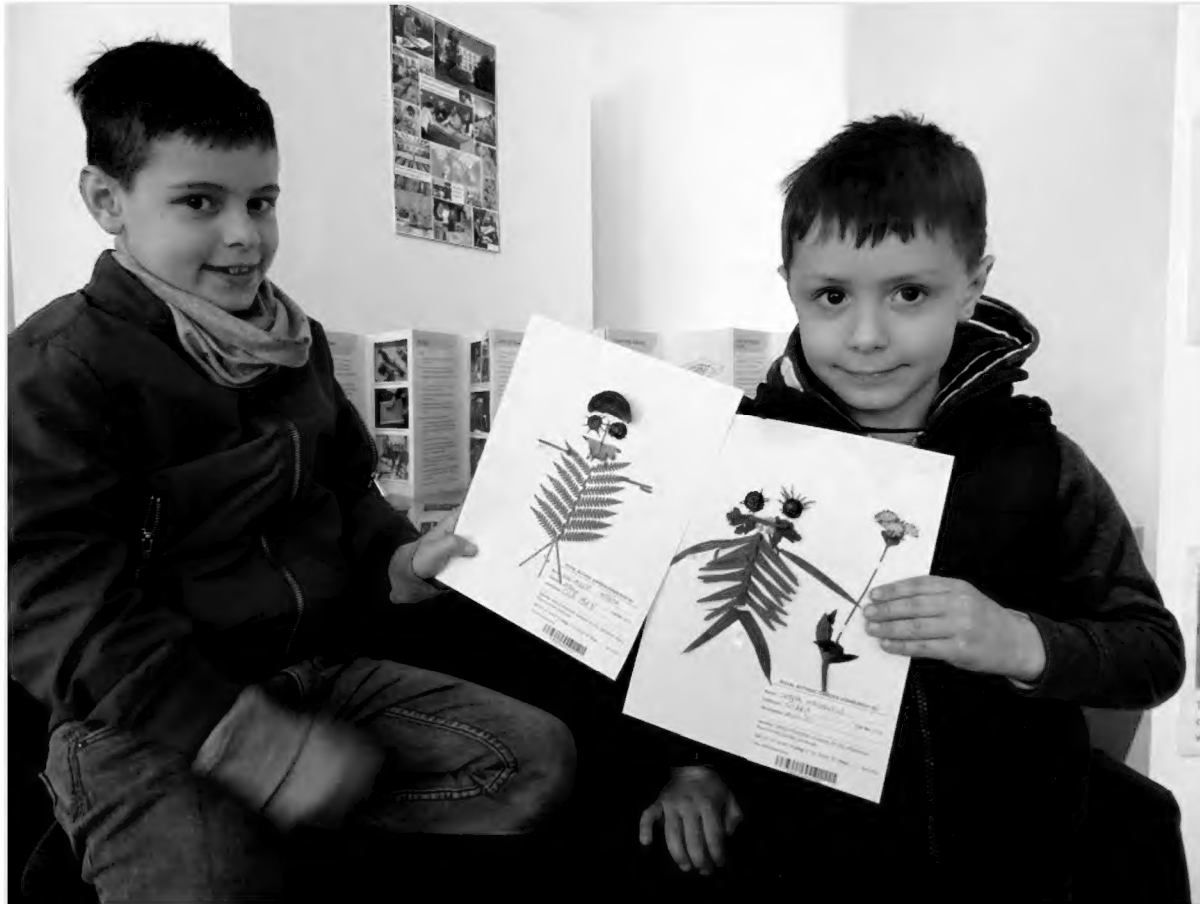


Figure 2.

Two participants and their specimens. ©Royal Botanic Garden Edinburgh, all rights reserved. Photo used by permission.

## Presenting author

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## Conflicts of interest

The authors have declared that no competing interests exist.